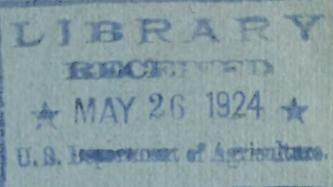


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FROM NURSERY TO ORCHARD

One Hundred and Twenty Varieties of Fruits
and Ornamentals Described

PRACTICAL INSTRUCTIONS
On the Planting and Care of Orchards and
Small Fruits in Oklahoma

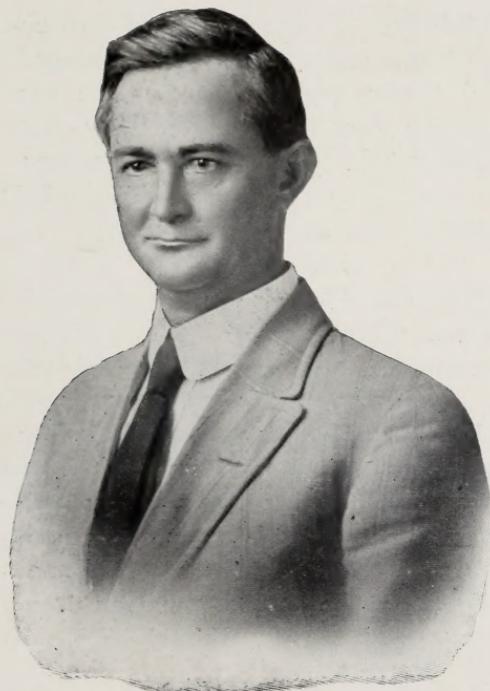
CONSERVATION OF MOISTURE
For Growth of Crops

By JIM PARKER, Nurseryman
Tecumseh, Pottawatomie County, Oklahoma

CONTENTS

VARIETIES OF FRUITS	
Apple, varieties	18-20
Planting and care	40-51
Peach, varieties	23-24
Planting and care	40-51
Pear, varieties	25
Planting and care	40-51
Plums	26
Cherries	26
Apricots and Nectarines	27
Grapes varieties	28
Planting and care	55
Strawberries, varieties	28
Cultivation	57
Blackberries, varieties	28
Cultivation	55
Dewberries, varieties	28
Cultivation	56
Raspberries, varieties	29
Cultivation	57
New Varieties Berries	29
Cultivation	57
Pie Plant, variety and care	29
Roses	30-32
Honeysuckle	32
Ornamental Shrubs	33
Ornamental Trees	34-36
Currants and Gooseberries	57
ILLUSTRATIONS	
Digging Trees	10
Nursery June 1st and digging time	11
Cion Orchard	12
Grafting Crew	13
Heading Apple	14
Budding Crew	15
Apple Seedlings June 1 and Jan. 1	16
One Year Apple	17
Sprouting Peach	21
Grades of Peach Trees	22
Pear Nursery	25
Residence	30
Corner in Shades	34
L. E. Parker and Sons	62
Conserving Moisture	51
PLANTING AND CULTIVATION	
Heeling in Trees	40
How to Restore Dry Trees	41
Time to Plant	41
Preparation of the Soil	42
Distance for Planting	43
How to Plant	43
How to Hold Moisture	51
Pruning Peach, Apple, Pear	47-49
MISCELLANEOUS	
Introductory	5
Fruits for Family	29
Drift to Cities	38
Philosophy of Contentment	38
Nobility of Labor	39
The Fruit Tree Agent	59
The Nurseryman	61

INTRODUCTORY



JIM PARKER

can be grown and to make our profits by selling large quantities.

LIFE IS TOO SHORT and too serious and we have neither the time nor inclination to cultivate our imagination in an effort to invent some plausible argument to induce home builders to pay high prices for the hot air in some "frost proof," "exclusive right," "trade mark," or other blue sky scheme. There is no monopoly either on varieties or on methods of growing trees. Trade marks are only monopolies on an advertising devise used in selling, and not monopolies on the growing of the

This book has been prepared for the purpose of helping purchasers make good selections of fruits for their homes, and to assist in their planting and care.

There is real demand for fruit trees and it is our wish to supply that demand with varieties of known merit.

We **recommend** only tested varieties because we feel that our customers are entitled to the benefit of our experience and to the knowledge gained by our State and Government Experiment Station.

OUR AIM is to grow and sell as good trees as

thing advertised. Armour uses a trade mark in advertising his beef business, but it does not prevent farmers from growing cattle. Our appeal is to common sense and experience; not to ignorance and curiosity.

WE HAVE NO SIDE SCHEMES. Prices are based on cost of production; the difference in price being governed by age and size of trees. Thriftiness and freedom from disease are the main traits which make a variety profitable to the planter, and these same qualities make a variety easy to grow in the nursery. Increased sales is sufficient compensation for any fair minded nurseryman for keeping in stock all varieties of real merit.

For the past twenty-four years I have made my living chiefly by growing and selling trees. Twelve years in Arkansas; twelve years in Oklahoma. My smallest crop of trees was 20,000. My largest crop season, 1910, a little over 3,000,000. I expect to continue in the business and hope to make more money in the future than I have in the past. At the same time I wish to handle my business in such a way that I may carry in my own mind the consciousness that my work is helpful to the world and that I am adding my share of labor to the sum total of human effort which is constantly making of this world a better place for all of us to live

JIM PARKER.

HOME BANKERS SAY:

Tecumseh, Okla., May 7, 1913.

To Whom it May Concern:

The Parker Nursery is among the leading industries of Tecumseh, having for a number of years had plantings ranging from one to three million trees, and paying out annually for labor about \$15,000.

This nursery has for the past ten years supplied most of the trees for planting in this part of the country, and any one purchasing trees from this firm will receive honest and fair treatment.

TECUMSEH NATIONAL BANK,
By E. L. ROSEBUSH, President.
FARMERS NATIONAL BANK,
By M. L. CALDWELL, Cashier.
FIRST NATIONAL BANK,
By H. R. NICHOLS, Cashier.

APPOINTED MEMBER STATE ENTOMOLOGICAL
COMMISSION



To All Who Shall See These Presents, Greeting,

Know Ye, That reposing special Trust and Confidence in the Ability and Integrity of Jim Parker I have appointed and do hereby Commission him State Entomologist for term

beginning April 29, 1915,

and do authorize and empower him to execute and fulfill the duties of that office according to the Constitution and Laws of the State of Oklahoma, and to have and to hold said office with all the powers, privileges and emoluments thereto appertaining unto him, the said

Jim Parker

In Testimony Whereof, I have caused the Secretary of State to attest this Certificate and caused these letters to be made Patent and the Great Seal of the State of Oklahoma to be affixed.

Given under my hand at the City of Oklahoma City the 29th day of April
in the Year of our Lord Nineteen Hundred and Eighteen and of the Independence of the
United States of America the One Hundred and Twenty-second

BY THE GOVERNOR

James A. Morrison
SECRETARY OF STATE OF THE STATE OF OKLAHOMA

Lee C. Custer

GOVERNOR OF THE STATE OF OKLAHOMA

The Entomological Commission has advisory oversight of all Horticultural and Entomological matters of the state. Formulates rules and regulations governing the Inspection of Nurseries, the Spraying of Orchards, and the prevention of the spread of injurious insects and diseases of farm and orchard crops.

The Commissioners are:

Prof. C. E. Sanborn, Stillwater, Okla., State Entomologist.
Benj. Hennessey, Sec. Board Agri., Oklahoma City.
Jim Parker, Tecumseh, Oklahoma.

BUSINESS TERMS AND CONDITIONS.

SHIPPING SEASON.—Our shipping season begins Oct. 15th and lasts until April 15th. We can pack trees in our storage house and ship with safety almost any week during the winter.

METHOD OF SHIPMENT.—Unless definite instructions accompany order, trees will be boxed or baled, as best meets requirements of order, and forwarded by freight, express or mail, according to our judgment.

TERMS.—Cash with order during shipping season. If order is placed in advance of shipping season, a payment of 25 per cent of order to accompany it, balance may be sent at time of shipment or stock shipped C. O. D., as best suits the convenience of customer. Send payment by money order, check, or any way to suit your convenience. No advance payment is required where orders are placed with our salesmen, and the customer may satisfy himself as to quality and condition of stock before payment.

WE GUARANTEE all stock sent out is well grown, well rooted, true to name, properly packed, and that it will reach customer in good condition for planting. Our liability under this guarantee is limited to original price received.

COMPLAINTS OR CLAIMS.—We are just like other folks: we sometimes make mistakes. We are glad to have our customers report them and will cheerfully and promptly make correction. We mean to make every deal satisfactory.

PREPAY CHARGES.—We prepay charges on all orders for \$10.00 or more. If you wish charges prepaid on order for less than \$10.00, add 15 per cent to amount of order.

SPECIAL PRICES.—To buyers of large lots we will be pleased to quote special prices if they will make out itemized list of what they wish to purchase.

SPECIAL TERMS.—We sell trees on five yearly payments with eight per cent interest, furnish trees on "Crop Contract," taking choice of one crop in fifteen years as payment, plant trees and care for them either for a cash consideration or for an interest in the orchard. We shall be glad to discuss plans with any one who needs credit or who would like to see his trees growing before paying for them.



This digger is operated like a sulky plow. By working levers the driver is enabled keep blade at any depth desired. A heavy steel circular blade runs under the trees and a lifter attachment throws trees practically out of the ground. No bruised bodies or mutilated roots on our trees, as is too often found among trees dug with a spade or with the cumbersome diggers commonly used.

This is our own invention and we are arranging for its manufacture.



Nursery as it Appeared June 1st.

Seedlings in foreground. Two year apple in background.
Budded apple to right.



The Same Field at Digging Time



CION AND EXPERIMENTAL ORCHARD ON HOME PLACE.

This is a permanent nursery planting, and will supply enough cions and buds to grow three million trees. There is so much danger of getting injurious insects or plant disease in the nursery by bringing trees and cions from outside, whether from orchards or nurserymen, that we do not want to take the chance. In 1909 we selected 125 varieties of apples, both new and old sorts, that were of prominence in different parts of the United States and planted them in our propagating orchard. Many of these varieties have been selected with especial care as to the bearing qualities of parent trees. We have Jonathan, Rome Beauty, Wine Sap and Stayman Wine Sap from trees that took blue ribbon for qualities of fruit in competition against the world. We mean to give our customers the best there is of pedigreed sorts or selected strains. We also mean to keep ourselves in a position to grow in quantity all new varieties that prove valuable.

We have also stocked up on other fruits and have over 200 varieties growing on our grounds. Our propagating blocks are well sprayed, well cultivated, and with this preparation, we know that we are safe in promising our customers healthy trees, true to name.



Grafting House Force

These Boys and Girls Put up 1,654,000 Grafts.

Two Hundred Thousand trees from that season's planting were shipped to one of our wholesale customers in Colorado, where every tree must be inspected by a competent State Entomologist before planters are permitted to receive the trees, and the official report of the Inspector of Colorado shows that trees from our nursery passed with less per cent of cull than trees from any other nursery doing business in the State.

We attribute much of our success in growing and grading trees to the fact that we employ only intelligent, honorable white help.

The QUESTION is not how we may get work done the CHEAPEST, but how we may GROW and DELIVER the BEST TREES to our CUSTOMERS.



This picture shows the height of our one-year-old apple trees being cut back to grow two year trees. For our trade in the Southwest trees are headed at twenty-two inches and pruned evenly so that the first limb on a two year old tree is fifteen inches from the ground.

In the seasons of 1911 and 1912 we had more apple trees growing at Tecumseh than were owned by any other individual nurseryman in the world. We were then selling in large quantities to a few of the very largest wholesale buyers in the United States. The bulk of these apple trees were going to the Rocky Mountain country. In 1911 we planted nine hundred thousand Jonathan apple grafts; other varieties were largely, Rome Beauty, Gano, Wine Sap, Stayman, and varieties of high quality. The reason these western people get so much better prices for their apples than other folks is not that their country is better, but that they plant high quality varieties and then spray and cultivate them.

We do a wholesale business with nurserymen on apple trees, and mean to excel in that one line of nursery work.



BUDDING APPLE TREES.

Both the season of 1911 and the season of 1912 we planted fifty bushels of apple seed, making a planting of about fifty acres. Every other row of these trees were budded in the field during September and October. The remaining rows were dug in order to supply seedlings for root grafting. Practically all of our one year apple for the season of 1913 will be grown from buds budded into French Crab that has never been transplanted.

We are among the very few nurserymen who have succeeded in growing trees in this way, and are the only ones, so far as we know, who have ever grown on a large scale after this manner. We have genuine WHOLE ROOT TREES. Our one year apple will give good results; they will have ideal tap roots.



Three Million Apple Seedlings. Field adjoining city on the north. Photo. June, 1912.



Every other row in same field being dug December, 1912. The remaining rows were budded during September and will make one year apple for 1913 and two year for 1914.



Tallest 6 ft. 8-in. Extra. 4-5 3-4 2-3 18-24 in.

One Year Budded Apple Graded Ready for Shipment

These trees were grown in the dry season of 1911. The tallest one year apple is six feet and eight inches.

Three-fourths of the trees planted in the west are one year trees. They give better results, chiefly because they can be dug with larger roots in proportion to their top. Eastern planters would top one year trees at 30 to 36 inches in height. Western planters at 24 to 30, and in the southwest many orchardists top trees at 18 inches. One year trees have live buds to the ground and should be allowed to branch and grow limbs all along the bodies during the first season. Rubbing buds and leaves off the bodies is a mistake. They should be allowed to grow and those not needed removed following winter.

Our best market, however, is south of us and I think our

opportunity lies in producing an apple that is good to eat during September, October and November. Such an apple will find ready sale either north or south, and if market conditions are such that it appears unwise to sell at that time, the fruit can be put in cold storage and we can take our chances in competition with fruit from Arkansas, Missouri and the Rocky Mountain country. From a money-making standpoint cold storage is the only way to keep fruit. Cost is only about 15 cents per bushel and apples ripening in September may be kept till next June. The following varieties are described in the order of preference as market apples for Oklahoma and the Southwest. They are all good apples for any part of the United States.

JONATHAN.—The most extensively planted variety and recognized as one of the best not only on account of its fine flavor but equally on account of hardiness of the trees, adaptability to any soil, and extra bearing qualities. Brings highest price in market. Oklahoma Jonathan can be ripened up and reach the markets ahead of the main crop and will bring top prices.

WINESAP.—One of the best varieties for both home and market. Tree a good grower and heavy bearer. Medium size red apple of fine flavor.

GANO.—A supposed Ben Davis seedling. Tree almost identical with that of the Ben Davis; fruit similar in shape, deeper red in color and a superior quality. Tree a good grower. Succeeds well on all soils.

ROME BEAUTY.—Large, with red stripes; tender and juicy. A fine sort for either home or market. On account of late blooming sometimes bears when others fail.

BEN DAVIS.—One of the oldest, best known and most profitable sorts.

MO. PIPPIN.—The earliest bearer; fruit bright red with numerous gray dots. A very profitable variety.

STAYMEN WINESAP.—Fruit is larger and tree hardier grower than Winesap. Fruit not quite so well colored. Profitable market variety.

APPLES FOR JUNE AND JULY.

YELLOW TRANSPARENT.—Hardy upright grower, bears early and abundantly. Best early apple. June 20th to July 10.

RED ASTRACHAN.—Trees very hardy. Good cooking apple. June 25th to July 15th.

EARLY HARVEST.—Oldest and best known June apple. Succeeds well everywhere. June 20 to July 10th.

RED JUNE.—Tree weak grower. Good flavor and bears well.

APPLES FOR JULY AND AUGUST.

MAIDENS BLUSH.—Clear skin with delicate red blush. Best all purpose summer apple. Long season of ripening makes it especially valuable where there is room only for a few trees. July 15th to Sept. 1st.

HORSE.—Large yellow; good flavor, good grower. August.

RAMBO.—Hardy grower; heavy bearer after trees are six or eight years old. Extra for apple butter. August 20th to Sept. 10th.

WEALTHY.—Medium size; red striped. August.

APPLES FOR SEPTEMBER.

GRIMES GOLDEN.—Medium size. Best eating apple grown Good market and keeps well in storage.

MARKET APPLES.

The bulk of what is known as winter apples are gathered in September. Jonathan, Rome Beauty, Winesap, grown in Oklahoma, unless they are put in storage, will mellow up during September and October. Oklahoma is on the southern border of the APPLE BELT. Our June apples are the first to take the place of cold storage apples. If planted extensively enough to ship in car load quantities June Apples would certainly prove profitable.

MAMMOTH BLACKTWIG.—Very large; flat shape, dark

red, good quality and valuable for market.

WHITE WINTER PEARMAIN.—Tree hardy and good bearer; valuable for either home or market.

YEL. NEWTON PIPPIN.—Fruit of extra quality, valuable both in Northwest and East. Untried in Oklahoma.

SPITZENBURGH.—Beautiful bright red, pleasant flavor, brings top market.

McINTOSH.—Bright, deep red; tender, high flavor; delicious white flesh. Tree long lived and productive.

BANANA.—Fancy market variety. Fruit a pale yellow.

DELICIOUS.—A new variety of great promise. Large, red, superior quality.

N. W. GREENING.—Fruit medium to large. Color, greenish yellow; flesh juicy, firm and fine grained. Very fine flavored. Tree is very hardy and thrifty grower. Early and continuous bearer; one of the longest keepers.

COLLINS (Champion).—Bright red, medium size.

BLACK BEN DAVIS.—Of the Ben Davis type; a large red apple, hardy and a fine market apple.

RAWLS JANET.—Small red striped; very late bloomer.

BALDWIN.—Leading market sort of the East. Red, medium size, juicy.

ARKANSAS BLACK.—It is a misfortune to the world that this variety was ever introduced. That it is a fine apple and good keeper is true, but it is such a poor bearer that it costs as much to grow one bushel of Arkansas Black as ten bushels of many equally as good apples.

CRAB APPLES.

TRANSCENDENT.—Large red; most profitable variety. The crabs are of particular value for preserves and jelly.

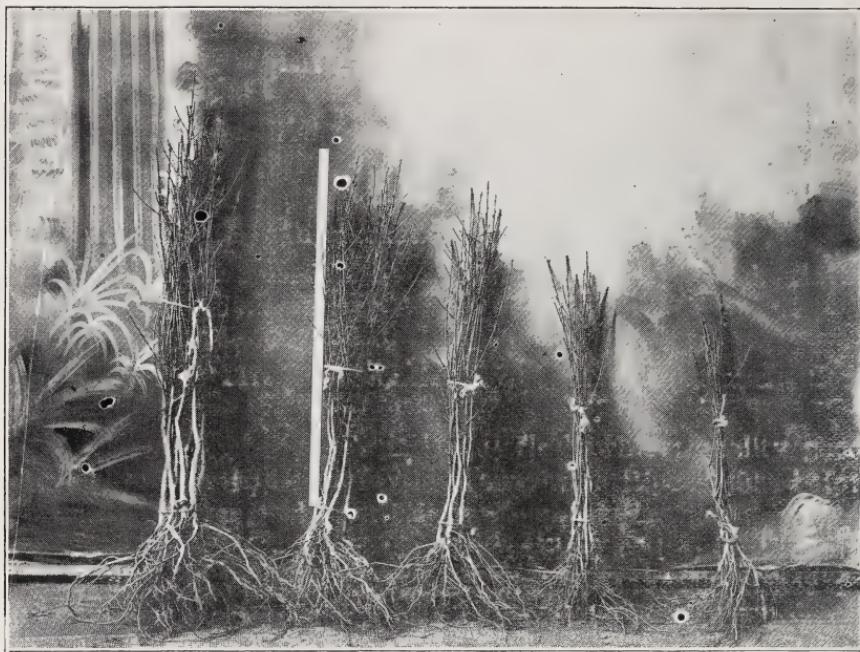


SPROUTING PEACH TREES.

The art of budding is so old that I think the Jews must have figured it out between times while making brick for Pharaoh. Buds from the desired variety are inserted in seedling trees and the seedling cut back and the tree grown from the bud. Great care must be taken or the wrong bud will be allowed to grow.

The budding of trees does not affect either their fruitfulness or their hardiness. It only enables us to reproduce a known variety. A little worthless variety might be budded for a hundred years without improvement. The apparent difference between the hardiness of seedlings and peaches of the Elberta class is in response to a rule of nature that large peaches are not so fertile in bloom as small peaches. The higher types of life, whether it be animal or plant kingdom, are poorer breeders than the lower types.

Through all the centuries, the process of selection of the best has improved the peach until what was once a poison almond is now one of the best of fruits for man.



3 ft. 2 1/2 ft. 18-24 12-18

GRADES OF PEACH TREES.

Stocky small trees like above are best to plant. We keep in stock but do not recommend 4-ft. and up trees. Where peach trees are planted with other fruit trees in a small orchard it may be well to start heads 18 to 24 inches from the ground, partly on account of appearance of the orchard and partly on account of greater convenience in cultivation. But if you are planting peach trees with a view of making money, top the trees at 15 inches and let them limb as low as they will. All the better if some of the limbs come out near top of ground and your tree appears to have no body. Such trees will bear better, live longer, and it will be a joy to stand on the ground and gather all the fruit.

VARIETIES OF PEACHES.

Every home should be supplied with plenty of this delicious

fruit. By careful selection of varieties, we may gather it fresh from the trees during June, July, August, September and October. A half dozen trees for each season of ripening will supply an abundance for family use. After taking care of the needs of the family, it is then best to plant whatever additional trees that are to be planted all of one variety. In considering what that variety should be we should take into account the fact that we must reach the market with carlot quantities and must therefore plant enough of one variety to have carlot shipments of our own or else plant a variety that is being extensively planted in the community. The Elberta peach is now the most popular commercial sort and it has held its own for the past fifteen years against an average of possibly twenty-five promising new varieties every year.

ELBERTA.—Large yellow freestone. May justly be called the “universal peach.” There is no place in the United States where peaches are grown but what the Elberta is one of the most extensively planted, both for home and market. In most communities, the only peach that it is profitable to plant for distant shipment, owing to the fact that it is the only one planted in sufficient quantities to make car load shipments.

ARP BEAUTY.—Resembles Elberta, but earlier.

SALWAY.—Resembles Elberta, ripening one week later.

THREE VALUABLE PEACHES FOR JUNE

EARLY WHEELER.—A recently introduced Texas variety. Tree vigorous and productive. Clingstone; flesh white; quality very good for an early peach; firm. Market. Season extra early. This variety is no doubt one of the most profitable for Southern Texas, as it is the earliest of all good shipping peaches. Valuable for home and local market anywhere, but very doubtful whether it will prove profitable as a market sort on Northern border of peach belt, as it would have to compete with varieties of better quality ripening farther south.

ALEXANDER.—Red clingstone; good bearer.

GREENSBORO.—Good early clingstone peach for home use.

THREE HOME AND LOCAL MARKET PEACHES RIPENING IN JULY.

TRIUMPH.—Yellow freestone, ripening last of June and first of July.

CARMEN.—Fruit large; freestone; flesh white, good quality. Good for home and market.

CRAWFORD'S EARLY.—Yellow freestone; good flavor, good bearer.

THREE VALUABLE CLINGS

CHINESE CLING.—Fruit large; flesh white; quality good; splendid sort for home or for local market. Ripens just before Elberta.

HEATH CLING.—Fruit very large; flesh white; quality good. Firm and good keeper. The best clingstone peach either for home or market. Ripen one to two weeks later than Elberta.

STINSON'S OCTOBER.—Fruit large. Clingstone. White meated and of excellent quality.

THREE VALUABLE FREESTONES

STUMP.—Large white freestone, ripening one week after Elberta.

CRAWFORD'S LATE.—Once the most popular market peach until Elberta supplanted it in the public favor. Freestone; ripens late.

PIQUETT'S LATE.—Medium size yellow freestone. Ripens very late.



VIEW OF OUR PEAR NURSERY.

PEARS.

KEIFER.—For sections of the country where pears are injured by blight, the Keifer is by far the best pear to plant, either for home or market. Tree very hardy; fruit large.

GARBER.—Hardy and bears young. Large, slight red blush. One of the best.

BARTLETT.—Largely planted as a summer variety of good quality. Should not be planted except where pears are comparatively free from blight.

Have you ever noticed how much better pears the "Dago" sells you at 5 cents each are than those your home folks offer? They are usually the same variety. The difference in the flavor of the pear is in the manner of ripening them. Pears to be at their best should be gathered as soon as ripe and wrapped in paper and put in a dark cellar to mellow up.

PLUMS.

All the following are well tried sorts.

RED JUNE.—Imported in the eighties from Japan. Tree vigorous, productive. Fruit medium to large; clingstone; skin red; quality fair to good; firm. Market. Season early.

ABUNDANCE.—Imported from Japan in 1884. Tree vigorous, productive. Fruit large; clingstone; skin yellowish red; quality good to very good; firm. Market and home. Season, early. In most sections considered better than Burbank for home purposes, but not so good for market.

BURBANK.—Introduced into the United States from Japan about twenty-five years ago. Tree vigorous and productive. Fruit large; clingstone; skin dark red; quality good; firm. Market and home. Season, late.

WICKSON.—Originated by Luther Burbank and introduced about twenty years ago. Tree moderately vigorous. Fruit very large; clingstone; skin dark red; firm. Season, late.

WILD GOOSE.—Originated in Tennessee and introduced about 1850. Tree vigorous; productive if other varieties are near by. Fruit medium; clingstone; skin yellowish red; quality mediocre. Not very firm but has tough skin and ships well. Market and home. Season, early.

GOLD.—Originated by Luther Burbank of California some years ago and introduced by Stark Bros. Tree undersized but healthy; productive. Fruit medium to large; clingstone; skin rich yellow. Season, late.

CHERRIES.

EARLY RICHMOND.—Earliest and one of the best varieties. Medium size; pale red.

DYEHOUSE.—Fruit large; quality good. Early.

LARGE MONTMORENCY.—Fruit large, skin dark red. Quality good. Ten day later than Richmond.

APRICOTS.

MOOREPARK.—Large, nearly round, orange, freestone, with a rich high flavor. The best.

ALEXANDER.—Large, sweet and juicy. Ripens early.

BOSTON NECTARINE.—Tree and fruit both very closely resemble peach, except that there is no fuzz on the fruit. Fruit as large as medium size peach. Red, freestone. Flavor similar to an apricot. Every home should have a half dozen Nectarine trees.

FRUITS FOR THE FAMILY

Have you forgotten your boyhood days? Those days of joyous youth, when, through the woods and in every old field and fence corner you raided in search of fruit? How every bite was relished! If there was no fruit on the home place, do you remember how strong the temptation was to "hook" these delicious, red-cheeked beauties, and when they were once devoured, how the spirit of full-stomachness persuaded you that somehow, as these good things made a fellow feel so good, it could not be bad to take them?

Why are children so hungry for fruit? Is it not because their growing systems require the particular kind of nourishment which fruits alone supply? Meats and bread supply muscle and heat to the body, with a very little brain and nerve food. Fruits supply muscle, brain and nerve food, with very little fats or heating property. This is why hard-working men live mainly on bread and meat, while school children, with their growing nervous systems and busy little brains, will almost starve for fruit.

We need meat in the winter; therefore, nature has arranged it so we could "slay and eat," and the meat would keep. The same wise Providence has so fixed it that every industrious man could supply his family with an abundance of nice, ripe fruits fresh from the trees and vines at any and all times from May to November.

GRAPES.

CONCORD.—Black, fair size, hardy. Succeeds everywhere. Been planted for sixty years and there is now more Concords planted than all other varieties together.

NIAGARA.—Hardy white grape of good quality.

MOORE'S EARLY.—Large early black grape. One of the best.

WORDEN.—Resembles Concord.

IVES.—Small black grape of extra keeping qualities and good flavor.

AGAWAM.—Hardy red grape; excellent flavor.

MOORE'S DIAMOND.—Clear skin, hardy white grape of good quality.

STRAWBERRIES.

MICHEL EARLY.—One of the best early strawberries of fair size.

EXCELSIOR.—Very popular early variety.

GANDY.—One of the best late varieties.

BLACKBERRIES.

EARLY HARVEST.—Season very early. Most desirable sort for the Southwest.

SNYDER.—Large; late; good flavor.

McDONALD.—A new sort, said to be a cross between the dewberry and blackberry. Bush vigorous; productive. Fruit large; quality good.

DEWBERRIES.

AUSTIN (Mays).—Fruit very large and fine flavor. During the past two dry years bore twice as much fruit as any other dewberry or blackberry on our place. Ripens very early.

LUCRETIA.—Large; one week later than Austin and of equal value except in dry years.

RASPBERRIES

KANSAS.—Hardest and best of black raspberries.

TURNER.—Hardest and best of red raspberries.

THREE VALUABLE NEW BERRIES

IMPROVED JUNEBERRY.—This is one of the best berries for Oklahoma. It originated in the West and is unusually well adapted to dry climates. The bush is of the sarvis and huckleberry type and the fruit resembles these two fruits very much both in flavor and appearance. Bears very young, and makes an attractive shrub which yields abundant crops of fruit.

LOGANBERRY.—Originated in California in 1882. Supposed to be a cross between the dewberry and raspberry. Vine vigorous, hardy, productive. This promises to be a very valuable addition to our assortment of berries.

GIANT HIMALAYA.—This wonderful berry was recently introduced from the Himalaya Mountains. It grows like a grape vine and should be trained to a trellis. The plant is extremely hardy and for rapid growth it has no equal. The bloom is shell pink, the size of a peach bloom. The fruit is large, resembles the blackberry, and is of excellent flavor.

PIE PLANT.

We are growing the Linnaeus and Victoria. Both are hardy and of about equal merit. Success with pie plant depends on deep and thorough preparation, and the soil should be of extra fertility.



Home of Jim Parker, Tecumseh, Okla.
California Privet in front. Everblooming Roses to the left.

ROSES

The love of the beautiful is implanted in the heart of every child. How eagerly the little feet run in search of the first flowers of spring. Farm boys and girls love the flowers and they should have them. There is something in their beauty and fragrance attuned to the deeper, nobler chords of youthful nature. The tragedy of the brightest boys and girls rushing from the farms to the cities would be greatly lessened if those same bright boys and girls were given an opportunity to grow the flowers they love. Roses will bloom six months in the year out of doors, and every farmer owes it to the bright side of his own nature, to his growing boys and girls, and to the good wife, who sees too little of things beautiful, to provide for his home a bed of Everblooming Roses.

HOW TO PLANT

You will have very poor success with roses if you try to grow them one in a place, surrounded by the grass of the front yard. You should select good soil, either in the yard or garden, at some place where you can cultivate it. The ground should be spaded twelve inches deep and made very rich. The roses should be planted either in a square or circle and the roses stand about two and a half feet apart. Plant deeply, firm the soil thoroughly around them and then water heavily. Cut back to within two to four inches of the ground. If planting is done in the fall, cover roses entirely over with soil, which should be removed before growing time in the spring. Give good clean cultivation during the whole of the summer. You will have constant blooming if you provide conditions under which roses will grow. Before the cold weather of winter, everblooming roses should be cut back to within four to six inches of the ground and entirely covered with earth or leaves to protect them during the winter. There is about one year in four in Oklahoma when everblooming roses would be killed if not covered. If there was no danger of winter killing, roses should be cut back every year, as it causes them to make a much more thrifty growth the following year and the blooms are always on the new growth.

The following varieties are hardy and furnish an assortment of colors. They will bloom from early May until they are killed by freezing weather. Many years we have more roses the first week in November than any other time of the year.

SIX HARDY EVERBLOOMING ROSES

METEOR.—The best of all velvet red roses. Flowers are medium size, very double, and beautiful in form. Very thrifty and prolific bloomer.

AMERICAN BEAUTY.—Is a hardy rose of the largest size. Its color is a deep red, shading to a rich carmine crimson; very fragrant.

ETOILE DE LYON.—A superb yellow rose with stems which resemble the rubber stemmed artificial rose. Thrifty grower, blooming from Springtime until Frost.

FRANCISCA KRUGER.—A favorite rose and the most satisfactory variety in its color. Strikingly handsome, blending deep yellow with coppery yellow and buff. The buds are long and fine.

KASERINE AUGUSTA VICTORIA.—Is celebrated for its beautiful long pointed buds and full double flowers. Color creamy white; fragrant; a good bloomer.

PAUL NEYRON.—A very fine hardy rose. The largest rose grown; often measures from four to six inches. Color, bright glistening pink.

THREE HARDY CLIMBING ROSES

The Yellow Rambler, White Rambler and Crimson Rambler are all suitable for training on porch or trellis or for any purpose for which a strong growing climbing rose is needed. They produce a very heavy bloom and are usually at their best on Decoration Day.

HONEYSUCKLE

CHINESE.—A hardy vine with bright green foliage. Very fragrant bloom.

HALL'S JAPAN.—Even in cold climates this vine holds its leaves until January; in the South it is evergreen. It is the freest-growing and blooming sort of all, showing fragrant flowers of buff and white from May until December in our latitude.

WISTARIA—CHINESE PURPLE

One of the most elegant and rapid growing of all climbing plants; attains an immense size, growing at the rate of 15 to 20 feet in a season. Bears an abundance of long pendulous clusters of purple flowers in May and June and again in Autumn.

ORNAMENTAL SHRUBS

ALTHAEC.—Double white and double red. Bloom late in summer. Flowers are like the Hollyhock in form. The shrub attains a height of from ten to twelve feet.

SNOW BALL.—A well known shrub growing six to ten feet high, producing its snowy white flowers in large balls or masses in April.

SYRINGA.—Sometimes called Mock Orange on account of the flowers resembling the orange blossoms. Blooms in May.

JAPAN QUINCE.—Sometimes called Burning Bush on account of its dazzling scarlet flowers which appear in great abundance early in the spring. Very hardy.

CRAPE MYRTLE.—A beautiful shrub, continuous bloomer. Flowers pink, crimson or white, with curiously crimped leaves.

WEIGELIA ROSEA:—Dwarf shrub. Blooms May, June and July. Flowers pink.

LILAC.—An early blooming shrub. Very hardy.

HEDGE

CALIFORNIA PRIVET.—Makes the best and most beautiful hedge. Valuable also as an ornamental shrub as it is almost an evergreen and can be trimmed to any desired form.

There is fine patience and broad charity in the man who plants a tree;
No single action better typifies the purpose of our living.
He who plants a tree plants shade, rest, hope, love, peace for troubled
ones who will come his way when he is gone,
There is nothing in which God asks so little and gives so much, as in the
planting of a tree.



Corner in our block of 40,000 four-year-old shade trees

ORNAMENTAL AND SHADE TREES ADAPTED TO OKLAHOMA

“Under the Spreading Chestnut Tree
The Village Smithy stands.”

Longfellow would have forgotten the Smithy and the Smith had it not been for that big shade tree. How many places along life's journey we remember as pleasant just because there was a tree or a group of trees there. They make a place look home-like and the shade is so inviting and restful that like Riley, the Hoosier poet, we exclaim:

“Spread them shadders anywhere,
I'll git down and waller there.”

Go into the cities in warm weather and you will see them sprinkling the streets to cool and moisten the air. In God's great out of doors the trees are pumping the water from the earth and evaporating it into the air. A twelve inch tree will liberate two hundred gallons of water into the air daily. The health and comfort of cities would be greatly enhanced by the planting of more trees. Every city should have a park commission empowered with full control of street planting of trees. Non-resident and speculative interests should not be permitted to interfere with the promotion of public health and comfort nor mar the beauty of a city. The problem should be handled as the sidewalk problem is now handled.

VARIETIES ORNAMENTAL TREES

MAPLE.—Common sort seen in our cities. Grows rapidly and is one of the best trees for street planting.

AMERICAN WHITE ELM.—Grows much more rapidly than the native Red Elm. Adapts itself to any soil or season. The most valuable shade tree grown. One hundred years from planting will still be healthy and beautiful.

LOCUST.—A valuable timber tree. Considered one of the best for street planting on hard soils and on the prairies of Western Oklahoma. Grows very rapidly.

CATALPA.—A valuable timber tree. Rapid grower and satisfactory for street planting, on any soil. Blooms profusely and its long bean-like pods add greatly to its striking appearance.

BOX ELDER.—Very rapid grower. Makes a dense shade

ASH.—Rapid grower. Stands extremes of hot and cold dry and wet weather well and is a good tree either for street or lawn planting.

SUGAR MAPLE.—In some parts of the country the manufacture of sugar from this tree is quite an industry. It grows rather slow, but its exceptionally dense foliage and compact form makes it one of the most valuable trees for beautifying the lawn.

SYCAMORE.—A strong grower and long lived tree.

CAROLINA POPLAR.—Remarkable for its erect growth and tall spire-like form.

UMBRELLA CHINA.—Most beautiful of all shade trees but winter kills badly.

NUT TREES

PECANS.—Too well known in Oklahoma to need description. We can supply either seedlings from selected seed or the best named sorts of Paper Shelled Pecans.

BLACK WALNUT.—This should be classed as one of our best shade trees. There is an inexplicable coolness about the shade of the walnut tree. Is it a deception of our senses caused by the peculiar aroma of the leaves, or does that fragrance actually produce a chemical effect on the air which makes it cooler?

Instructions on the Planting and Care of Orchards

PREPARED WITH A VIEW TO THE NEEDS OF
OKLAHOMA PLANTERS

REMARKS

In preparing these instructions we have tried to keep in mind the man who knows nothing about fruit growing, to begin with the beginning, and tell in as direct a way as possible what we believe to be the best methods of planting and caring for fruit trees and plants in Oklahoma. Thousands of farmers own farms and are planting orchards in Oklahoma who have had no previous experience in fruit growing. Others still have come from sections where the climatic conditions are so unlike those in Oklahoma that their experience counts for little. It is to assist in supplying this need that these instructions were prepared.

Do you realize that plants are imbued with life very similar in all its functions to animal life? When you plow, do you see only the dry dirt, and never wonder at the transformation of inanimate dust to the delicious fruit of the tree and the flowers that no artist can equal for their beauty? Have you seen the grain of corn come up and change to food for man, and know nothing more about cultivation except that you plowed to keep the weeds down? Do you walk the earth and behold its clothing of green, trimmed with fragrant flowers more beauteous than the robes of Solomon, and regard the earth as merely a solid place on which to place your feet, instead of as being a part of the immense design, a link in the chain of that universal life which binds us all to God?

Plants grow, but can you tell me from whence they procure their food, from earth or air? If you are so sure that they get their food from the earth, can you not tell whether this food, when taken from the earth, is already digested or whether there is some part of the tree or plant that corresponds with the stomach of animals? Which will drink the most water on a hot day: a thousand-pound horse or a thousand-pound tree? There is two and one-half feet of rainfall all over your place, but do you know how to manage the soil so that your orchard and berry patch may have water during the hot weather when they need it most?

DRIFT TO CITIES

There seems to be a tendency among the farming classes to believe that study is not necessary in order to become a successful farmer. As a result of this mistaken idea, the farms are sending their best brains to the city. No sooner does a community note that a young man has ability to acquire a common school education than the farmers begin to speculate on the profession that young man should choose. Thus, from year to year, we are sending thousands of our brightest young men to the city to increase the ranks of those who live by speculation and not by production. The more dealers there are in proportion to the number of customers, the higher prices does the purchaser have to pay. All must live. It is with farming as it is with all other professions. The clear head, the firm resolve, the unerring judgment that succeeds.

PHILOSOPHY OF CONTENTMENT

There are many improvements that would be made were it not for the fact that so many people are dissatisfied. To be satisfied is something that may not be obtained by going a globe-trotting. The only way is to decide quickly on a place and on a profession and go to work. The land of milk and honey seems always just beyond. The man who keeps moving and looking for something better is never satisfied until he settles

down in some place even worse discouraged than ever, and, out of sheer desperation, decides that he will settle down and begin in earnest to fix up just such a home as he would like to have in that ideal country. As he gets things nearer and nearer to his notion, he becomes more and more interested, and finally gets to love the place from association and from the fact that he has made it a home worthy to be loved. Then he looks back over the past and sees that he could have built as good a home in any of the previous places he has lived. His hind sights are all right.

NOBILITY OF LABOR

There is no difference in the nobility of labor. The man who follows the plow, changing the seemingly lifeless earth to food and beauty for the enjoyment and support of mankind, is doing his duty and fulfilling the designs of his Creator, just as much as the man who sells goods, serves his country in public office, or whose voice is heard from pulpit or before the courts of justice, and in the great day his reward will be accordingly. In fact, it is so now. Happiness is a delusive quality. It is not purchased with gold, with knowledge or with fine acquisitions. It is largely within your own heart and your own consciousness, and when you seek it elsewhere you do not find it.

The price of honor is honesty. The price of contentment is industry. The price of happiness is being willing to give back to the world full measure in service for all joys received.

A man seventy-five years of age said to me: "I can hardly expect at my age to live to eat fruit from those trees, but I want to leave with the world payment for the good things which other men provided for me. As a boy, I enjoyed fruits planted by others, and I want to repay the debt by leaving something for others to enjoy." It is something akin to this spirit which makes us all like to see the trees grow.

GENERAL INSTRUCTIONS

In presenting these instructions, we earnestly request that the most careful attention be paid to every detail, unless there is something advised that you know to be wrong, in which case it would be regarded as a favor if you will write the author, stating in what he is wrong and why he is wrong.

There is no great mystery about fruit-growing, but only the necessity for common sense, industry and punctuality that is necessary for the growth of other crops. These instructions have been prepared with a view to make them as direct and plain as possible, and space will not admit of us entering more fully into the laws of plant life that render certain methods of planting or cultivation of the soil necessary.

HEELING IN TREES

Don't take the nurseryman's plant as you see it on delivery day. Trees must have soil touching the roots, and this is impossible when they are in bales. Dig a ditch fifteen inches deep, cut all the string and separate the bunches, and dip the roots of the trees in water. Place the trees in the ditch, with the tops leaning to the south. Cover the roots well with fine soil and pack it down firmly. Then pour on enough water to thoroughly wet the soil around the roots. Then hill up the dirt around the trees, so it will extend at least one foot on the bodies of the trees. If there is not rainfall enough to keep the ground thoroughly wet, water the trees every week. This is absolutely necessary in order to keep them in good condition. Water is just as necessary to the life of trees as it is to the life of a horse, and it is just as absurd to complain at the nurseryman because your trees have wilted after standing for a month or more in a dry soil without being watered, as it would be to complain at the man you bought a horse of if you should let him go without water for a week. The horse and the trees would both look wilted from the same cause, lack of sensible care.

Peach trees should be heeled in with tops leaning as described for other trees and should be entirely covered with earth. This method is the sure way for all trees unless you are certain you can water them punctually and plentifully. If trees are left in the bundles only temporarily, the bundle should be entirely covered with earth.

Berry plants may be kept a little while by separating the bunches, dipping the roots in water and then heeling in, so the dirt will be well around the roots of each plant. If they have to remain more than a few days, cover with a thin layer of straw and keep them watered.

HOW TO RESTORE DRY TREES

If, through improper heeling or neglect to water during the winter, your trees show shriveled buds and wilted branches, don't become discouraged and try to argue yourself in laying the blame on the nurseryman. The matter may not be so serious as it seems. Probably the trees just need swelling out for the same reason that a horse without water would need a drink. The best way to do this is to open up a ditch and lay the trees in it, then wet them thoroughly and cover them entirely up with soil. Let them remain in this position for from two to seven days, or until the wilted appearance has left them.

TIME TO PLANT

Much more depends upon the condition of the trees, the condition of soil and the manner in which the work is done, than upon the time in which trees are planted. For successful planting trees should be in dormant condition, the ground should be moist, but not wet, and care should be taken to firm soil particles around the roots. Trees can be planted in Oklahoma at any time from November 1st to April 1st, and if the trees are kept in dormant condition may be planted up to the 1st of May. Trees cannot be dug fresh from nursery rows and transplanted with success later than the 1st of April, and many seasons not that late. Trees dug in the fall or early winter and planted at

that time, or kept in dormant condition until planting time by healing in the ground or in good storage house, will give better results than trees dug fresh from the nursery rows in the Spring, because they will have had time for the roots to callous ready to commence growth. The best advice about the time to plant is—don't delay from week to week and from season to season. Do it NOW!

PREPARATION OF SOIL

A very large portion of the complaints against nurserymen on account of trees not living long have no foundation, except that the planter does not properly prepare his ground before setting the trees. Fruit trees must remain on the same ground for a number of years, indeed, for a lifetime, and it is therefore of the utmost importance that the ground be properly prepared before planting an orchard.

Root systems of trees go after the plant food in the soil wherever that may be. If it is old land with no plant food deeper than six inches, and the under layers of subsoil rendered almost impenetrable by repeated turning of the land to a certain depth, trees will not root deeply, however "whole-rooted" they may be. Forms of the root systems of trees are governed chiefly by the distribution of plant food in the soil. If the plant food is in the upper six inches, the root system will be in the upper six inches. If the soil is rich in plant food twelve or eighteen inches deep, the root system of the tree will be distributed to that depth.

If you want deep-rooted trees that will be long lived and stand the drouth, the one thing that must be done is to work the ground deep before planting. Then cultivate deep for two or three years after planting, gradually getting farther and farther from the trees as they grow. Now, please remember that this deep cultivation is for the soil before planting, and for the trees for the first two or three years after planting only. After the trees are large enough to bear, the habits of the root systems are already formed, and it would do only injury to go in and tear them up.

The foregoing has been written with a view to the needs of orchards, but it applies with almost equal force to the preparation of the soil for berries and grapes. The better the preparation, the better the results. Success in fruit growing depends very much on a proper beginning.

DISTANCES FOR PLANTING

If we could speak the word, and, Aladdin-like, an apple orchard would spring into existence, we would say, just plant them fifty trees to the acre. But we cannot do this, and if orchards are planted fifty trees to the acre, some will die before they reach full bearing age and the orchard will not have enough trees, and, besides, trees do just as well seventy-five trees to the acre till they are almost fifteen years of age. By this time, we will have received several paying crops, and even if we have lost some trees, there will be enough left to produce a profitable crop. The replanting of orchards that have reached bearing age is seldom a success. For these reasons, we say, plant not less than seventy-five apple trees to the acre. We prefer planting apple trees twenty-one feet by thirty feet apart, which would make seventy-five trees to the acre. Let the rows running north and south be thirty feet, and the rows east and west twenty-one feet. Trees planted this way will protect each other to some extent both from sun and wind. If a few trees die out when they begin to bear, they need not be replaced, as the space will be fairly well taken up.

For peach trees, we would advise thirty by fifteen feet, or some modification of that plan. If a large commercial orchard, and there was no doubt of it being cultivated, whether other crops were planted or not, then my advice would be twenty-one feet seven inches by fifteen feet, which would be exactly 150 trees to the acre. In common farm practice, the odds are more than ten to one that cultivation will cease as soon as other crops cannot be grown in connection with cultivation of orchard, and this is one reason for advising wider rows one way and sufficient space to cultivate some crop. One of the mysteries of

experience in the orchard business is why a man will cultivate a plat of land while trees are young for a crop of cotton or corn worth \$15 per acre, but will not cultivate the orchard when it comes into bearing, and the increased yield from care would make him five times the value of common crops.

NUMBER OF TREES TO AN ACRE

30 by 30	feet,	50	apple.
30 by 21	feet,	75	apple or peach.
24 by 24	feet,	75	apple or peach.
21 by 21	feet,	100	peach, apple, pear.
30 by 15	feet,	100	peach, pear, plum.
21 by 15	feet,	150	peach, pear, plum.
15 by 15	feet,	200	plum or dwarf pear.
10 by 10	feet,	435	grape.
8 by 8	feet,	680	grape.
7 by 3½	feet,	1,800	blackberries, dewberries.
7 by 2	feet,	3,100	blackberries, dewberries.
4 by 4	feet,	2,700	dewberries.
3½ by 1½	feet,	8,300	strawberries.

Rule.—Multiply the distance in feet between the rows by the distance the plants are apart in the rows, and the product will be the number of square feet for each plant or hill, which, divided into the number of feet in an acre (43,560), will give the number of trees or plants to the acre.

HOW TO PLANT APPLE, PEACH, PEAR, PLUM, CHERRY

Lay off the rows with stakes and a plow, and be sure to get them straight. The saving of labor in cultivation will pay you many times for all care taken in this way, even if we say nothing about the improved appearance of the orchard.

Dig the holes deeper and larger than is necessary to admit the roots in their natural position, keeping the surface soil and subsoil separate. In heavy, close soils the larger the holes are dug, the better, but I do not recommend spading out those "three foot square" holes. If it is really necessary to prepare

the root bed in this way, it is much more economical to use a subsoil plow and dig the holes as big as the orchard, or in other words, to stir the whole of the ground to the desired depth.

Cut off all broken and bruised roots, with the slant from the under side, but, otherwise, do as little root trimming as possible.

Don't let the trees be exposed to the sun and air while you are at work planting. Many trees are ruined by letting them lie around for several hours in the sun.

Dip the roots of the trees in water or thin mud just before planting.

Fill in the bottom of the hole with surface soil, and place the tree at a depth so that after the earth is filled in it will set about two inches deeper than it did when in the nursery. In hard, heavy soils the trees should be planted at the same depth as they stood in the nursery, but in sandy soils should be planted from two to six inches deeper.

Work the soil thoroughly among the roots, being careful to keep them in their natural position, and fill the hole up level with the top of the ground.

Take a maul and beat the earth firmly around the roots of the trees, till they set as firm as a post. Nurserymen use the maul a great deal in the planting of young trees. The reason for this is that the soil particles must lie very close to the roots of trees or they cannot absorb the moisture, and as we do not often have rains in Oklahoma after the trees are planted in the fall, we must pack the earth around the roots, or they will not be properly nourished, even if the ground has sufficient moisture. Should the ground be wet enough at the time of planting so that this mauling makes the dirt stick together, do not do any mauling, but plant the trees without the maul. However, if there is not a heavy rain so as to pack the earth, the mauling should be done in a week or so after the trees are set, and then throw loose dirt around the trees to a depth of four inches.

After having packed the earth with a maul, pour on about a gallon or more of water to the tree, and cover the whole over

with four inches of loose soil.

If the winter is very dry, look over your orchard and see if there are any buds shriveling; if so, water the trees. It won't cost half a cent to the tree to do this, and will be much cheaper than losing a part of the trees and not getting as good growth on the others.

Don't put manure in the holes around the roots of the trees, but use it on the surface as mulching.

HOW GROWTH IS ACCOMPLISHED

The feeding of trees and plants is accomplished by the absorption of water by the roots. This water, or sap, might be compared to a very thin soup. By some force closely akin to that which makes the blood circulate in your body, this plant food is continually being carried upward. The warmth of the sun evaporates the surplus water, or, to put it bluntly, boils down the soup.

The contact, while in the leaves, of the food particles with certain properties in the air, changes the form of the food particles to adapt them to the particular needs of the tree or plant; in other words, digests the food. The sap, as it flows upward, is very much alike in plants, and does not differ very materially from the water you would leach off should you fill an ash-hopper with finely pulverized soil and then water, and leach off in the way your mother made lye.

LOSS OF SAP DURING WINTER

A subject about which the people seem to be in entire ignorance is the loss of sap from the branches of trees by evaporation during the winter. An apple tree will lose one-tenth of its weight in three days, and a peach tree about one-fifth. For this reason, there must be thoroughly moist earth closely packed around all the roots of the trees, so that the roots may absorb the moisture and pass it up to the bodies of the trees to every branch and bud, to take the place of that lost by the evaporation. The transplanting of the trees has, by cutting

away a part of the root system, reduced its means of procuring water to just that extent. Herein lies the urgent necessity for seeing, not only that trees are well watered, but also that the soil particles lie close enough to the roots so they may avail themselves of this needed food and drink.

PRUNING TREES

The transplanting of trees unavoidably destroys from one-to two-thirds of the root system, and if all the buds are left on them, the amount of nourishment furnished will only sustain life under the most favorable circumstances, and if a severe drouth comes, the trees will die for want of nourishment. Whereas, by reducing the number of buds in proportion to the roots, the roots will feed the remaining number well, and cause the tree to make a good growth. If you put ten pigs in a pen, and feed them well, they will grow; but should you take away half the feed, you must reduce the number of pigs in the pen, or they will only live or perhaps will starve. The principle is the same with plant life. The transplanting of the trees has, by reducing the root system of the tree, reduced the plant's means of obtaining food, and you must reduce the number of buds to be fed if you want thriftiness of growth.

PRUNING APPLE

Apple and Pear.—One-year-old apple and pear trees should be cut back to about two feet in length if you desire low-topped trees. If you make the mistake of wanting high-topped trees, the best way to start them is to cut back to fifteen inches in length and allow only one sprout to grow the first season, and not try to form the head of the tree till the second season.

In the prairies of western Oklahoma, where winds lean trees badly and bodies are sometimes injured by sun scald, one-year apple and pear trees should be headed at fifteen inches and allowed to limb to the ground.

The standard of height for the heads of fruit trees, as determined by the average judgment of experienced fruit growers,

is fully twelve inches lower than fifteen years ago. Twenty years ago many farmers endeavored to start first limbs high enough that they would not skin limbs with hames while plowing under the trees. Every experiment toward lower-headed trees has proved for the better, and I believe the time is near at hand when it will be said, "Trees need no bodies. Let them limb from the ground up. Such trees will not be leaned by the wind, they will not be injured by sun scald, they are easier to prune, easier to spray, and at harvest time no ladders are needed in gathering, and the work can be done much better and much cheaper than on the old-fashioned, high-topped trees." Were it not that I would be so much at variance with the usual advice of horticultural writers, I would give just that advice to orchard planters now, and say that it was good advice, not only in the southwest, but any place in the United States.

Two-year-old trees should have the side branches cut back to stubs two to four inches long. Varieties like Winesap, Black Twig and trees that make open, spreading top should be cut with terminal bud left on top of end on limb. Apple trees that make upright growth, like Transparent and all varieties of pear trees, should be cut back so terminal bud is on the under side of limb. This will cause them to make open-headed trees.

PRUNING PEACH

Peach trees, on account of the more porous nature of the bark, lose sap by evaporation much more rapidly than apple trees, and for this reason require more severe pruning. Peach trees should have all side branches cut to one inch, so new limbs will start from body of the tree. If planting small orchard in connection with other trees, and beauty and convenience of cultivation are considerable factors, top trees at twenty or twenty-four inches, so they will have something of the appearance of other trees in the orchard. Large trees may be used with advantage, if you want high-headed trees. If you are planting to make most money you will get best results from

planting smaller trees that have live buds to the ground, and head such trees at twelve or eighteen inches and let them grow without further pruning during first season's growth. If you think best, remove the lower limbs during the following winter. My advice is, plant trees not larger than two to three-foot grade, and head when planted to twelve inches, and allow trees to form limbs to the ground.

COMMON MISTAKE

One of the most common mistakes made with young trees is to strip the leaves off the bodies of trees during the first summer. A little insight into the way growth is accomplished will convince any one of the seriousness of this mistake. For every pound of weight added to trees and plants, they absorb through the roots from fifty to one hundred pounds of water. This water is thrown off through the leaves during the growing season, and certain changes in the food taken up by the roots of the trees take place in the leaves, which correspond very closely with digestion in animals. The receding sap builds up the tissues of the tree. To remove half the leaf surface is simply to reduce the plant's means of evaporating water and to impair a life function similar to digestion in animals. No summer pruning should be done on young trees.

Summer pruning, root pruning, boring holes in trees, stripping the bark from the bodies and various other mutilating processes, enthusiastically recommended by some people as promoting fruitfulness, are of very doubtful policy. Such treatment does cause trees to set fruit, but it is in response to an instinct implanted by the Creator in all forms of life, which causes all things to desire to perpetuate their species. This shock to the life forces brings to bear all the life powers of the tree to the production of seed. It is in response to this same instinct which causes worm-eaten and stunted trees to set a crop of fruit before they die.

My plan is to prune tolerably severely at the time of planting, and for the first two or three winters afterward, so as to

establish the balance between root and top, while, at the same time, getting the tops started in the right shape, and then to do very little pruning, except to remove water sprouts or limbs that cross.

FUNDAMENTAL PRINCIPLES OF CULTIVATION

It is obvious that in order that a tree or plant may obtain all the food within the reach of its roots, it should not be interfered with by other growths. Hence, the necessity for keeping the weeds down. But in our efforts to keep down the weeds we should not lose sight of the other objects of cultivation:

First, to render the food in the soil available for the use of plants.

Second, to conserve the moisture of the soil. When it is taken into account that trees must use from fifty to one hundred pounds of water for every pound of weight added in growth, it will be seen that the preservation of moisture is of very great importance.

The under layers of the soil are usually as rich in plant food as the upper soil, but it lies dormant until rendered available by the effects of sunlight, heat and cold. This is a gradual process. We cannot render available all the fertility in the soil at once. If we could, our grasping age would raise one crop equal to a thousand crops, and then the world would starve. What we can do, and must do if we succeed with any crop, is to cultivate and loosen up the soil so as to admit the air, the sunlight and frosts. Chemical actions of these forces, governed by fixed laws, render a part of the fertility of the soil available for plant food.



View of nursery showing rows floated after plow to make dust mulch for conservation of moisture.

HOW TO HOLD MOISTURE

There is thirty inches of rainfall in the eastern part of Oklahoma, and the average rainfall decreases to twenty inches in the western part. The soil is of an open, porous nature, and nearly all the rainfall sinks into the earth. Think of it! In one year, two and a half feet deep. In two years, over the top of the fence. In the time since you staked your claim, enough water has fallen on your place to drive you to the house top.

Where does it go? How does it get there? It ascends in the form of vapor, forms into clouds and, coming into contact with cold currents of air, is condensed and falls again in the form of rain. Thus does the Creator carry on his immense system of irrigation.

But our chief interest is in how the earth gives back the water to the air?

In the explanation of the nature of plant growth, it is seen that a very large amount of water is taken up by the roots of trees and plants and thrown off by evaporation into the air. If you wish to know how much water is being used by the weeds in your orchard, cut them from a certain fraction of an acre, and weigh them. After one day's exposure to the sun, weigh again. The difference in weight will show the amount of water the weeds are using daily.

If you were to look at the earth through a magnifying glass, you would see air cells or small openings running far down into the earth. The harder the earth is packed by rains, the more perfect are these openings, and it is through these that the water is evaporated from the earth. The way, then, to check evaporation is to stir the soil and break up these air cells. Moisture evaporates three times as rapidly from uncultivated lands as it does from a soil that has been stirred so as to thoroughly pulverize the surface. The way, then, to conserve the moisture for the use of crops is to cultivate as soon after each rain as the ground will do to work. Careful nursery-men follow the plow with a drag, which levels up and pulverizes the surface, thus not only checking evaporation, but breaking up the clods, so the sun and air, acting on them, may increase the fertility of the soil. Keep in mind the forms of the roots, so as not to destroy them, and give shallow, level cultivation every ten days during dry weather.

The man who goes into his orchard with a turning plow, or into a field of corn with his cultivator after the ground is already dry, is doing injury, instead of good; for the reason that he is cutting away the roots at a time when the ground is too dry for them to re-establish themselves, thus taking away the means of life.

Hire some man to steal your turning plow, so you won't be tempted to let the weeds get so high that you cannot make a sign with any other tool; otherwise, you may let the weeds rob the trees till it is too late for plowing to do any good, and then turn them under and call it cultivation. Using the mowing machine will do more good than the turning plow.

The larger the orchard gets, the better it pays to cultivate it, for the same reason that the larger the hog, the more it eats.

CROPS FOR THE ORCHARD

Owing to the fact that a man will not work a young orchard unless there is some other crop planted in it, I usually advise the planting of cotton in the orchard for the first five years. The cultivation given cotton is very much like that needed for young trees, and with a little labor of hoeing around the trees they will make a first-class growth with little cost of cultivation.

Cotton, on account of being plowed later than corn, is a better orchard crop than corn.

Potatoes and melons are good crops for the orchard.

Peas and beans, on account of their peculiar manner of feeding from the air and depositing fertility in the soil are, of course, so far as the crops themselves go, the very best of crops for the orchard. If you plant these crops in the orchard, try to plant so you would be cultivating during July and the first of August. This is not the best way to raise peas, but it is the best way to cultivate them for the good of the orchard.

Wheat and rye are bad crops for the orchard, except where they are planted as winter protection for the soil and plowed under early in April.

Oats should not be planted in an orchard. There is no amount of hoeing around the trees or cultivation after the crop is off that will keep an oat crop from stunting the trees.

You can raise grass in the orchard, either for hay or for calf pasture, providing you don't know enough to appreciate the difference in value between one hundred pounds of grass and one hundred bushels of apples, or of 90 cents' worth of calf and \$100 worth of fruit.

When trees are four to six years old and are beginning to yield a bushel or more of fruit to the tree, plant mule legs, spring-tooth harrows and cultivators so thick that no weed can grow. Give clean, level surface cultivation from the first of April or the middle of August.

Fruit trees are usually planted 100 to the acre. So you

see a crop of one bushel to the tree would yield 4,000 bushels on forty acres. Two bushels to the tree would be 8,000 bushels on forty acres, worth, at 50 cents per bushel, \$4,000. Come to think about it, will it not pay you to give the orchard proper cultivation for the orchard's sake alone?

WHY ORCHARDS ARE NEGLECTED

Does it not seem singular that it is from the very reason that orchards are not so exacting in their demands for punctual attention as other crops, which causes all or nearly all of the complaints about caring for them?

Corn, cotton, potatoes, all must be planted and cultivated at the right time or we fail entirely. Yet who grumbles about these things? A man who worms tobacco every day will argue that orchards cannot be raised on account of borers, though a washing of soap and sulphur about the middle of May will keep most of them out, and once over in September with the knife will do the rest.

Suppose you see your neighbor sitting on the fence grumbling at the country because his corn looks yellow and is dying, when, at the same time, it has not been worked since planting. An orchard in full bearing requires as much food and drink as a corn crop, yet how wonderfully easy it is for a fellow to lay the whole thing onto the country, and claim that orchards are a failure. It's human nature. When the Almighty gives a man an inch he wants ninety feet. The very reason that a man can get some fruit without any work makes him want trees to live always without work and never fail to bear.

HOW TO GROW SMALL FRUITS

GRAPES

Grapes require a warm, well-drained soil and a sunny exposure. For these reasons, Oklahoma soil seems peculiarly adapted to the growth of grapes. Grapes are usually planted eight feet apart each way. In preparing the vines for planting,

cut off all broken and bruised roots, and cut back the top to a stub only two or three inches long. Dig the holes large enough to receive the roots in their natural position, and set the vines three or four inches deeper than they grew in the nursery; in fact, after they are properly pruned, there should be only two or three inches of vine showing above the ground. Beat the earth very firmly around the roots, water and cover over with loose soil, as directed for fruit trees.

The general rule for pruning grapes is to cut back so as to leave from two to four joints of the previous year's growth. Grapes require clean, level cultivation during the whole of the growing season.

BLACKBERRIES

The first thing for you to do is to get the idea out of your head that as blackberries will produce fruit without much care, it is not necessary to cultivate them. But it is claimed some of these wild berries, when properly cared for, are equal to those from nurseries. If this is true, you are all the more at fault if you do not plant a patch and care for them. Of all the inconsistent men I meet, the fellow that blows about his wild berries, but won't plant them, takes the lead. He may be a good soul, but he won't help his wife rustle berries from the woods and fence corners, believing, of course, that if he eats them he does his part.

Blackberries should be planted in rows seven feet apart, and the plants set from one to three feet apart in the row. If land is scarce and you wish quick results, plant thicker. Cover the roots a little deeper than they were before being taken up, and pack the soil well around them. Blackberries sprout from the roots, not from the cane which is cut off, and it is useless except to show the location of the plant. Roots of blackberries do not sprout early in the spring, so do not conclude that your plants are dead if they are not green as soon as other vegetation. Hoe the weeds from around them and plow the middle of the row, and they will come up some time in May or the first of June, and get large enough to bear a nice crop of fruit.

Blackberries should have level, clean cultivation during the whole of the growing season. Five plowings are usually sufficient, but until the crop is off, care should be taken to thoroughly pulverize the surface of the soil after each rain, as this precaution is likely to save the crop in case of drouth just at ripening time. This means about half a day's work on a quarter of an acre, which will produce an abundance of fruit for family use. With some varieties it is desirable to pinch off the top bud of the canes when they are three to four feet high, in order to make them branch, but usually those long, slim canes are caused by plants standing too thick on the ground, and the proper thing to do is to hoe out a portion of the young plants just as they come up. As soon as the fruit is off the old plants should be removed.

DEWBERRIES

Dewberries should be planted in rows seven feet apart and three and one-half feet apart in the row. For field culture, it is best to plant them four feet apart each way, so they can be worked with a plow. Dewberries, like blackberries and raspberries, grow vines one year, and the next year bear and die. They are very hardy, and will grow well on any kind of soil, and should have about the same kind of cultivation as directed for blackberries.

When the vines are a foot and one-half long in the summer, cut off the end so they will branch and make strong fruit-bearing buds for the next year's crop. Dewberries, like grapes, produce a number of berries from each bud, so don't be afraid of pruning them too much. Dewberries, properly cared for, will produce from two to four quarts to the hill, and, at 15 cents per gallon, are worth from \$200 to \$400 per acre. They are nearly twice as large, are more tender and juicy than blackberries, and no home berry patch is complete without them.

RASPBERRIES

Raspberries should be planted in rows seven feet apart, and

the plants set three and one-half feet in the row. They should have the same treatment as blackberries, except that they require more moisture, and the selection of land and cultivation of raspberries should be chiefly with the view of maintaining moisture in the soil during July and August.

GOOSEBERRIES AND CURRENTS

Gooseberries and currants should be planted in rows seven feet apart, and the plants set three and one-half feet apart in the row. The soil must be packed very firmly around the roots. In selecting a place to plant and in cultivation, keep in view the necessity of maintaining moisture in the soil. If you allow them to get weedy in August, the dry weather will be almost sure to kill them.

Gooseberries and currants are not very well adapted to Oklahoma, and I would not advise their planting, except in the eastern part of the state.

STRAWBERRIES

Ranking first in small fruits, comes the beautiful and delicious strawberry. They grow successfully in any soil suitable for garden, but for Oklahoma require a special care in order to adapt them to the peculiar climatic conditions. They should be planted where they can be worked with a horse and plow, as they do not do well in beds. Lay off your rows three and one-half feet apart with a line or light marker, and set the plants one and one-half feet apart in the row. Make a hole large enough to receive the roots well spread out, and then draw the dirt back to around the plant. Tamp the ground with the foot, then water and cover over with loose earth, leaving the top bud just above the ground.

Cultivating should begin as soon as growth commences in the spring, and shallow, level and clean cultivation should be given to the middle of August, or until the fall rains begin.

After the first season you need not commence cultivation till after the crop is off, which will be about the first to the mid-

dle of June. Then bar off rows, hoe out the plants till they stand six inches or a foot apart in the row, and give clean, level culture, as herein directed. All strawberry culture in Oklahoma should be chiefly with the view to conserving the moisture of the soil.

HUCKLEBERRIES, OR JUNEBERRIES

Huckleberries, or Juneberries, are not well enough known to be properly appreciated. Several years ago they were found growing wild in western Kansas, and since have been extensively planted. At six years' planting, the bush would be about as high as a man's head and would have a number of small sprouts standing around it. Every sprout will bear fruit, and they come nearer being frost-proof and a sure crop than any fruit I know of.

Plant seven feet apart, and set plants three and one-half feet apart in the row. Give clean, thorough cultivation during the growing season.

THE FRUIT TREE AGENT

A great many of the nursery people who issue catalogues attach great importance to the idea that the catalogue is their only salesman. The catalogue business is a very satisfactory way of doing an honorable business, and we expect to use the catalogues the best we know how, but there is no special economy in catalogue business. It costs money to advertise in the newspapers; it costs money to print catalogues, and it costs time and money for clerk hire and office work in making deals by correspondence. We issue a catalogue to reach those people whom we cannot reach personally, and for the further purpose of giving instructions to our salesmen and to our customers, so they may know better how to select the best sorts of fruit.

The fruit-tree agent is a much-abused person, and too often this abuse is justified; but I must say that, based on my own observation of more than twenty years, I am inclined to think that, in most instances, the nursery who employs the salesman is quite as much to blame, or even more so, than the salesman himself. Many firms expect their salesmen to get exorbitant prices for all stock sold, and in their effort to invent argument by which exorbitant prices may be secured, misrepresent the goods which their salesmen are offering. Naturally, the agent himself believes that his employer is telling the truth. But, in spite of all these apparent evils of the system, it does not necessarily follow that growing and selling trees may not be as honest employment as growing and selling corn.

The nursery business, in all its phases, is a complicated business. We carry about 150 varieties of fruit, and in most varieties there is a number of different grades of trees offered for sale. Added to this, there are many varieties that are profitable under certain conditions, and worthless under others. It takes patience and hard work to learn how to sell trees honestly and intelligently. We do find some difficulty in

getting men to properly prepare for the work before commencing, and it is not surprising that it is difficult to get salesmen who understand the nursery business sufficient when there is a large per cent of farmers themselves who do not understand the principles involved in growing trees. If the farmers did understand these principles, the class of fruit-tree men about whom there is most complaint would have to quit business because the people would know too much to pay high prices for hot air.

We mean to employ only men who are gentlemen in the highest sense of the word, and if any one knows of any conduct to the contrary by any of the men representing us, they will confer a favor, not only on us, but on the public as well, by letting us hear about it.

More than half of the farmers in Oklahoma need to buy a few trees every year, and where industrious, intelligent, honest men can be secured to do the work, the most satisfactory way of making sales is to call on these people, know what they have and what they need and take their orders for the nursery stock to be delivered at the proper time. In this way, large shipments can be secured for delivery at certain places, and it works a great saving of freight and expense, and gives the purchaser a chance to know whether or not he is getting good trees in good condition before he pays for them. I admit that the agent's persuasive powers often secure orders from people who had not originally intended to buy, but the man buying is making a good investment, and there are many more homes provided with fruit than would have had fruit had it not been for the industry and persuasive powers of traveling salesmen. On the whole, I consider the fruit-tree agent a man whose work in the world is doing good for mankind.

THE NURSERYMAN

The growing of plants and trees is the most complicated of all agricultural work. The nurseryman puts in more labor and spends more money on the cultivation of an acre of ground than any other tiller of the soil.

He spends most of his days amid fragrant flowers and growing trees. His mind is employed trying to understand more of the laws of life and growth. For him the secrets of the beauties of nature have a peculiar fascination.

As he stirs the soil to warm it up, to dry it out, to conserve its moisture, to give it air and sunshine, that it may unlock its storehouse of fertility for the nourishment of life, and watches its kindly response to his care, he sometimes fancies that indeed the earth is imbued with life and wisdom, and that the trees and flowers he loves are to him close akin.

He looks beyond the field in which he plows, and sees the great railways hurrying their trainloads of fruit from the mountains of the west to the cities of the east, and it does him good to know that his labors in the fields and his influence with men has helped to bring into being this great wealth. And, looking still beyond the field of thriving enterprise, he catches a glimpse of thousands of orchards in bloom, while 'neath the trees the children play and ponder over the mysteries of nature, even as he did in childhood's happiest days, and he asks the question: Has not he done his part of the labor of the world; and, for the joys of his youth provided by those who came before, given back to the world full measure?



ELMER PARKER
Aurora, Ark.

GÉORGE PARKER
Fayetteville, Ark.

JOHN PARKER
Aurora, Ark.

LEWIS E. PARKER
Aurora, Ark.

JIM PARKER
Tecumseh, Okla.

The Parkers are all Nurserymen and Fruit Growers. If Jim sometimes seems over enthusiastic, try to believe that the love of orchards, trees and plants is "bred in the bone" and he cannot help it. The name, Parker, means one who cares for a park. This two generations seems to have inherited the spirit of their sire of long ago, whose enthusiasm in caring for trees was so great that his real name was dropped and that of his occupation substituted, thus giving rise to the name Parker.

